Attorney Docket #: AGLT-10030184-1

1/4

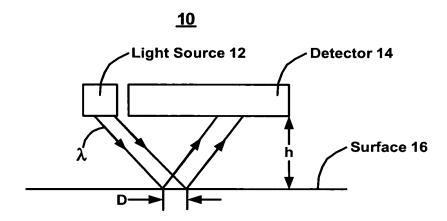
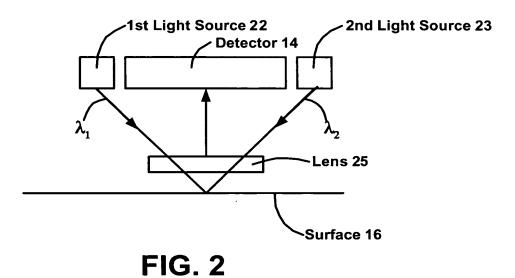


FIG. 1

<u>20</u>



INVENTOR(S): Marshall Thomas DePue, Dale W. Schroeder, and Tong Xie Attorney Docket #: AGLT-10030184-1

2/4

<u>30</u>

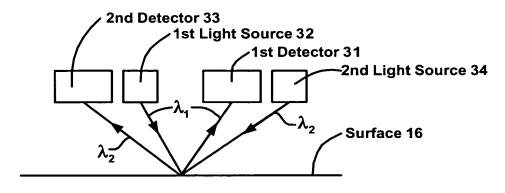


FIG. 3

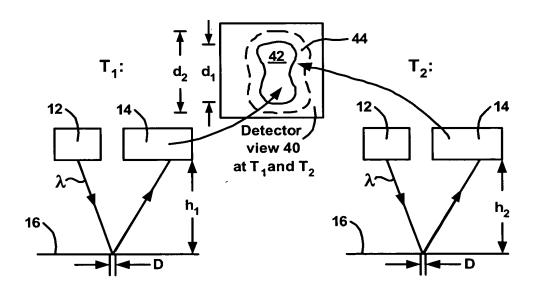


FIG. 4

INVENTOR(S): Marshall Thomas DePue, Dale W. Schroeder, and Tong Xie Attorney Docket #: AGLT-10030184-1

3/4

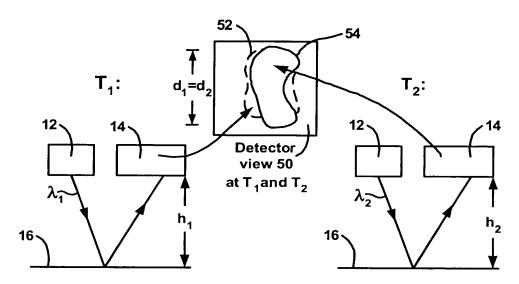


FIG. 5

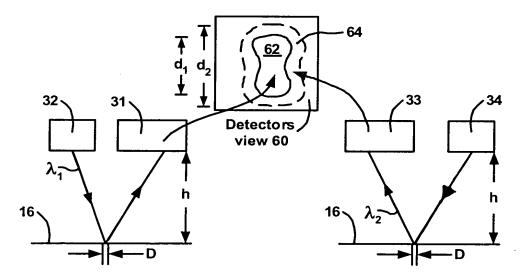


FIG. 6

TITLE: AN OPTICAL DEVICE THAT MEASURES DISTANCE BETWEEN THE DEVICE AND A SURFACE

INVENTOR(S): Marshall Thomas DePue, Dale W. Schroeder, and Tong Xie Attorney Docket #: AGLT-10030184-1

4/4

70

DETECT A 1st SPECKLE PATTERN PRODUCED BY LIGHT AT A 1st WAVELENGTH THAT IS REFLECTED FROM A SURFACE AT A 1st DISTANCE TO THE SURFACE

<u>72</u>

DETECT A 2nd SPECKLE PATTERN PRODUCED BY LIGHT AT A 2nd WAVELENGTH THAT IS REFLECTED FROM THE SURFACE AT A 2nd DISTANCE TO THE SURFACE, WHEREIN THE 1st AND 2nd WAVELENGTHS ARE SELECTED SO THAT A MEASURE OF THE 1st SPECKLE PATTERN AND A MEASURE OF THE 2nd SPECKLE PATTERN ARE APPROXIMATELY EQUAL

74

MEASURE DISTANCE TO THE SURFACE USING THE RATIO OF THE 1st AND 2nd WAVELENGTHS

76

FIG. 7

80

DETECT A 1st SPECKLE PATTERN PRODUCED BY REFLECTED LIGHT AT A 1st WAVELENGTH

<u>82</u>

DETECT A 2nd SPECKLE PATTERN PRODUCED BY REFLECTED LIGHT AT A 2nd WAVELENGTH

84

MEASURE DISTANCE BETWEEN AN OPTICAL DEVICE AND A SURFACE USING QUANTIFIABLE VALUES ASSOCIATED WITH THE 1st AND 2nd SPECKLE PATTERNS

<u>86</u>

FIG. 8